

REMARKS

The outstanding Official Action and cited art have been considered and the application amended as believed appropriate.

Specification

An amendment has been made to the specification to clarify what is meant by the expression "a kind of a right cylinder." The definition is consistent with the preferred exemplary embodiment of the invention described in the Detailed Description.

Claim Objections

Claims 9 - 11 are objected to in the outstanding Official Action as dependent from multiple dependent claim 8. M.P.E.P. § 608.1(7) is cited. This objection is not correct. A copy of relevant portions of M.P.E.P. § 608.1(7) is attached with markings to emphasize support for the propriety of applicant's claims 9 - 11. A claim dependent from a multiple dependent claim is objectionable only if it is itself a multiple dependent claim. See, as well, 37 C.F.R. § 1.75, reproduced in the enclosed M.P.E.P. portions. Claims 9 - 11 are not multiply dependent and so are proper claims. Claim 9 depends only from claim 8. The dependency of claims 10 and 11 was corrected by the Preliminary Amendment filed in this application so as to be only dependent with claim 8 and accordingly is in conformity with United States patent practice. Withdrawal of the outstanding objection and allowance of claims 9 - 11 at this time is respectfully requested.

The Rejection of Claims 1 - 4 and 5 - 8

In the outstanding Official Action, the examiner rejects claims 1 - 4 as anticipated by the patent to Costa and claims 5 - 8 as being obvious over Costa in view of the patent to Shimizu.

None of the documents cited in the outstanding Official Action disclose the features of the invention claimed in these claims. There is no way in which the cited art can be combined to provide that which is not provided in any of the cited documents. Accordingly, the current claims are patentable in view of the cited prior art.

Costa discloses a core-coil of a fluorescent light ballast with a shunt for providing a magnetic path between primary and secondary windings (col. 1, lines 5 - 7). The core-coil includes a bobbin 10 from a thermoplastic material (col. 2, lines 19 - 20) with a plurality of radially extending flanges or walls 52, 54, 56, 58, 60, 62, 64, 66, 68 and 70. These flanges or walls define a plurality of winding sections 72, 74, 76 and 78 for providing coil windings, i.e. wires wound around the bobbin 10 (col. 2, lines 45 - 68). A U-shaped metal shunt 86 is inserted between the flanges 66 and 68 and is held there by barb-like protrusions 80 during manufacture and operation of the shunt as shown in Figs. 3 - 5 (col. 3, lines 1 - 30).

Unlike in the invention as claimed in claim 1, the metal shunt 86 does not form a winding of one of the coils. It just provides a magnetic path between primary and secondary windings. Furthermore, the flanges or walls do serve as a side support for the wire windings wound within the winding sections but not the metal shunt as claimed in claim 1. Consequently, claim 1 is not anticipated by Costa and such rejection should be withdrawn as to claim 1, and, by virtue of their dependencies, as to claims 2 - 4 as well.

Shimizu describes a flyback transformer 10 with a low tension (low voltage) coil bobbin 11 with a primary coil 15 wound on the outer surface of the bobbin 11 (col. 3, lines 4 - 11). The transformer 10 further includes a high tension (high voltage) coil bobbin 16 provided around the bobbin 11 where a secondary coil 17 is wound around the outer surface of the bobbin 16 (col. 3, lines 11 - 15). Also the transformer includes an auxiliary bobbin 18 provided below the high

tension coil bobbin 16 on the lower portion of the low tension coil bobbin 11 where a tertiary coil 19 is wound on the outer surface of the bobbin 18 (col. 3, lines 15 - 20).

In the Official Action, the examiner cited this document because it discloses a coil body that is composed of two or more elements such as shown for example in Fig. 12. However, this document is not relevant regarding the claimed features of the invention that, as pointed out above, are absent as well from the primarily relied-upon Costa patent. Shimizu does not disclose a separating plate as claimed in claim 1 and by dependency in claims 5 - 8. The Costa and Shimizu patents cannot be combined to provide the separating plate absent from both patents and these claims should be allowed.

The Rejection of Claims 12 - 15

Claims 12 - 15 stand rejected over the combination of Costa and Shimizu for obviousness under 35 U.S.C. § 103.

Claim 12 has been amended to more clearly point out that the entire coil body that supports each of the coils is "split into at least two elements." Costa's coil body is not in two pieces, of course, and this is the examiner's reason for turning to Shimizu. In Shimizu in Figs. 7 and 8 it will be seen that the entire coil body that holds each coil of the inductive element is not split, but rather only the "auxiliary bobbin 18" that holds just the auxiliary coil. Neither Costa nor Shimizu teaches the provisions of claim 12 in this respect. Again the two references cannot be combined to achieve what is not present in either. Claim 12 (and by their dependencies claims 13 to 15) should now be allowed, it is respectfully submitted.

Conclusion

For the reasons set forth above it is respectfully urged that all of the claims now present in this application are patentable over the art of record and should be allowed at this time.

Favorable reconsideration of this application at an early date is respectfully requested.

A three month extension of time in which to respond to the outstanding Official Action is requested in the accompanying Request for Extension, submitted in duplicate. A check in the amount of \$1,020.00 is enclosed to cover the fee for the extension. No further fee is believed necessary, however the Commissioner is authorized to charge any insufficiency or credit any overpayment to the deposit account number 070135 of attorneys for applicant.

Any questions or suggestions regarding the application or the amended claims submitted herewith should be directed to the undersigned attorneys for applicant at the telephone number listed below or by email to the email address listed below.

Respectfully submitted,

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Date: July 9, 2007

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Examiner Note:

This paragraph should only be used for applications filed on or after September 23, 1996.

¶ 7.29.01 Claims Objected to, Minor Informalities

Claim[1] objected to because of the following informalities:
[2]. Appropriate correction is required.

Examiner Note:

1. Use this form paragraph to point out minor informalities such as spelling errors, inconsistent terminology, etc., which should be corrected.
2. If the informalities render the claim(s) indefinite, use form paragraph 7.34.01 instead to reject the claim(s) under 35 U.S.C. 112, second paragraph.

¶ 7.29.02 Claims Objected to, Reference Characters Not Enclosed Within Parentheses

The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Examiner Note:

1. Use of this paragraph is optional. You may instead choose to correct the error yourself at time of allowance by informal examiner's amendment.
2. If the lack of parentheses renders the claim(s) indefinite, use form paragraph 7.34.01 instead to reject the claim(s) under 35 U.S.C. 112, second paragraph.

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¶ 7.29.03 Claims Objected to, Spacing of Lines

The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

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Amendments to the claims must be in compliance with 37 CFR 1.121(c). **

608.01(n) Dependent Claims [R-5]**I. MULTIPLE DEPENDENT CLAIMS**

37 CFR 1.75. Claim(s).

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. A multiple dependent

claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation purposes also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(j). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

Generally, a multiple dependent claim is a dependent claim which refers back in the alternative to more than one preceding independent or dependent claim.

The second paragraph of 35 U.S.C. 112 has been revised in view of the multiple dependent claim practice introduced by the Patent Cooperation Treaty. Thus 35 U.S.C. 112 authorizes multiple dependent claims in applications filed on and after January 24, 1978, as long as they are in the alternative form (e.g., "A machine according to claims 3 or 4, further comprising ---"). Cumulative claiming (e.g., "A machine according to claims 3 and 4, further comprising ---") is not permitted. A multiple dependent claim may refer in the alternative to only one set of claims. A claim such as "A device as in claims 1, 2, 3, or 4, made by a process of claims 5, 6, 7, or 8" is improper. 35 U.S.C. 112 allows reference to only a particular claim. Furthermore, a multiple dependent claim may not serve as a basis for any other multiple dependent claim, either directly or indirectly. These limitations help to avoid undue confusion in determining how many prior claims are actually referred to in a multiple dependent claim.

A multiple dependent claim which depends from another multiple dependent claim should be objected to by using form paragraph 7.45.

¶ 7.45 Improper Multiple Dependent Claims

Claim [1] objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim [2]. See MPEP § 608.01(n). Accordingly, the claim [3] not been further treated on the merits.

608.01(n)

MANUAL OF PATENT EXAMINING PROCEDURE

Examiner Note:

1. In bracket 2, insert --should refer to other claims in the alternative only--, and/or, --cannot depend from any other multiple dependent claim--.
2. Use this paragraph rather than 35 U.S.C. 112, fifth paragraph.
3. In bracket 3, insert --has-- or --s have--.

Assume each claim example given below is from a different application.

A. Acceptable Multiple Dependent Claim Wording

Claim 5. A gadget according to claims 3 or 4, further comprising --

Claim 5. A gadget as in any one of the preceding claims, in which --

Claim 5. A gadget as in any one of claims 1, 2, and 3, in which --

Claim 3. A gadget as in either claim 1 or claim 2, further comprising --

Claim 4. A gadget as in claim 2 or 3, further comprising --

Claim 16. A gadget as in claims 1, 7, 12, or 15, further comprising --

Claim 5. A gadget as in any of the preceding claims, in which --

Claim 8. A gadget as in one of claims 4-7, in which --

Claim 5. A gadget as in any preceding claim, in which --

Claim 10. A gadget as in any of claims 1-3 or 7-9, in which --

Claim 11. A gadget as in any one of claims 1, 2, or 7-10 inclusive, in which --

B. Unacceptable Multiple Dependent Claim Wording**1. Claim Does Not Refer Back in the Alternative Only**

Claim 5. A gadget according to claim 3 and 4, further comprising --

Claim 9. A gadget according to claims 1-3, in which --

Claim 9. A gadget as in claims 1 or 2 and 7 or 8, which --

Claim 6. A gadget as in the preceding claims in which --

Claim 6. A gadget as in claims 1, 2, 3, 4 and/or 5, in which --

Claim 10. A gadget as in claims 1-3 or 7-9, in which --

2. Claim Does Not Refer to a Preceding Claim

Claim 3. A gadget as in any of the following claims, in which --

Claim 5. A gadget as in either claim 6 or claim 8, in which --

3. Reference to Two Sets of Claims to Different Features

Claim 9. A gadget as in claim 1 or 4 made by the process of claims 5, 6, 7, or 8, in which --

4. Reference Back to Another Multiple Dependent Claim

Claim 8. A gadget as in claim 5 (claim 5 is a multiple dependent claim) or claim 7, in which --

35 U.S.C. 112 indicates that the limitations or elements of each claim incorporated by reference into a multiple dependent claim must be considered separately. Thus, a multiple dependent claim, as such, does not contain all the limitations of all the alternative claims to which it refers, but rather contains in any one embodiment only those limitations of the particular claim referred to for the embodiment under consideration. Hence, a multiple dependent claim must be considered in the same manner as a plurality of single dependent claims.

C. Restriction Practice

For restriction purposes, each embodiment of a multiple dependent claim is considered in the same manner as a single dependent claim. Therefore, restriction may be required between the embodiments of a multiple dependent claim. Also, some embodiments of a multiple dependent claim may be held withdrawn while other embodiments are considered on their merits.

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D. Handling of Multiple Dependent Claims by the Office of Initial Patent Examination

The Office of Initial Patent Examination (OIPE) is responsible for verifying whether multiple dependent claims filed with the application are in proper alternative form, that they depend only upon prior independent or single dependent claims and also for calculating the amount of the filing fee. Form ** PTO/SB/07 has been designed to be used in conjunction with the current fee calculation form ** PTO/SB/06.

E. Handling of Multiple Dependent Claims by the Technology Center Technical Support Staff

The Technology Center (TC) technical support staff is responsible for verifying compliance with the statute and rules of multiple dependent claims added by amendment and for calculating the amount of any additional fees required. This calculation should be performed on form ** PTO/SB/07.

There is no need for a TC technical support staff to check the accuracy of the initial filing fee since this has already been verified by the Office of Initial Patent Examination when granting the filing date.

If a multiple dependent claim (or claims) is added in an amendment without the proper fee, either by adding references to prior claims or by adding a new multiple dependent claim, the amendment should not be entered until the fee has been received. In view of the requirements for multiple dependent claims, no amendment containing new claims or changing the dependency of claims should be entered before checking whether the paid fees cover the costs of the amended claims. The applicant, or his or her attorney or agent, should be contacted to pay the additional fee. Where a letter is written in an insufficient fee situation, a copy of the multiple dependent claim fee calculation, form ** PTO/SB/07 should be included for applicant's information.

Where the TC technical support staff notes that the reference to the prior claims is improper in an added or amended multiple dependent claim, a notation should be made in the left margin next to the claim

itself and the number 1, which is inserted in the "Dep. Claim" column of that amendment on form ** PTO/SB/07 should be circled in order to call this matter to the examiner's attention.

F. Handling of Multiple Dependent Claims by the Examiner

Public Law 94-131, the implementing legislation for the Patent Cooperation Treaty amended 35 U.S.C. 112 to state that "a claim in dependent form shall contain a reference to a claim *previously set forth*." The requirement to refer to a previous claim had existed only in 37 CFR 1.75(c) before.

The following procedures are to be followed by examiners when faced with claims which refer to numerically succeeding claims:

If any series of dependent claims contains a claim with an improper reference to a numerically following claim which cannot be understood, the claim referring to a following claim should normally be objected to and not treated on the merits.

However, in situations where a claim refers to a numerically following claim and the dependency is clear, both as presented and as it will be renumbered at issue, all claims should be examined on the merits and no objection as to form need be made. In such cases, the examiner will renumber the claims into proper order at the time the application is allowed. (See Example B, below.)

Any unusual problems should be brought to the supervisor's attention.

Example A

(Claims 4 and 6 should be objected to as not being understood and should not be treated on the merits.)

1. Independent
2. Dependent on claim 5
3. Dependent on claim 2
4. "... as in any preceding claim"
5. Independent
6. Dependent on claim 4

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MANUAL OF PATENT EXAMINING PROCEDURE

Example B

Note: Parenthetical numerals represent the claim numbering for issue should all claims be allowed.

(All claims should be examined.)

1. (1) Independent
2. (5) Dependent on claim 5 (4)
3. (2) Dependent on claim 1 (1)
4. (3) Dependent on claim 3 (2)
5. (4) Dependent on either claim 1 (1) or claim 3 (2)

The following practice is followed by patent examiners when making reference to a dependent claim either singular or multiple:

(A) When identifying a singular dependent claim which does not include a reference to a multiple dependent claim, either directly or indirectly, reference should be made only to the number of the dependent claim.

(B) When identifying the embodiments included within a multiple dependent claim, or a singular dependent claim which includes a reference to a multiple dependent claim, either directly or indirectly, each embodiment should be identified by using the number of the claims involved, starting with the highest, *to the extent necessary* to specifically identify each embodiment.

(C) When all embodiments included within a multiple dependent claim or a singular dependent claim which includes a reference to a multiple dependent claim, either directly or indirectly, are subject to a common rejection, objection, or requirement, reference may be made only to the number of the dependent claim.

The following table illustrates the current practice where each embodiment of each claim must be treated on an individual basis:

Claim No.	Claim dependency	Identification All claims	Approved practice
1	Independent	1	1
2	Depends from 1	2/1	2

Claim No.	Claim dependency	Identification All claims	Approved practice
3	Depends from 2	3/2/1	3
4	Depends from 2 or 3	4/2/1 4/3/2/1	4/2 4/3
5	Depends from 3	5/3/2/1	5
6	Depends from 2, 3, or 5	6/2/1 6/3/2/1 6/5/3/2/1	6/2 6/3 6/5
7	Depends from 6	7/6/2/1 7/6/3/2/1 7/6/5/3/2/1	7/6/2 7/6/3 7/6/5

When all embodiments in a multiple dependent claim situation (claims 4, 6, and 7 above) are subject to a common rejection, objection, or requirements, reference may be made to the number of the individual dependent claim only. For example, if 4/2 and 4/3 were subject to a common ground of rejection, reference should be made only to claim 4 in the statement of that rejection.

The provisions of 35 U.S.C. 132 require that each Office action make it explicitly clear what rejection, objection and/or requirement is applied to each claim embodiment.

G Fees for Multiple Dependent Claims**1. Use of Form ** PTO/SB/07**

To assist in the computation of the fees for multiple dependent claims, a separate "Multiple Dependent Claim Fee Calculation Sheet," form ** PTO/SB/07 has been designed for use with the current "Patent Application Fee Determination Record," form ** PTO/SB/06. Form ** PTO/SB/07 will be placed in the application file by the Office of Initial Patent Examination (OIPE) where multiple dependent claims are in the application as filed. For Image File Wrapper (IFW) processing, see IFW Manual. If multiple dependent claims are not included upon filing, but are

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later added by amendment, the TC technical support staff will place the form in the application file. If there are multiple dependent claims in the application, the total number of independent and dependent claims for fee purposes will be calculated on form ** PTO/SB/07 and the total number of claims and number of independent claims is then placed on form ** PTO/SB/06 for final fee calculation purposes.

2. Calculation of Fees

(a) Proper Multiple Dependent Claim

35 U.S.C. 41(a), provides that claims in proper multiple dependent form may not be considered as single dependent claims for the purpose of calculating fees. Thus, a multiple dependent claim is considered to be that number of dependent claims to which it refers. Any proper claim depending directly or indirectly from a multiple dependent claim is also considered as the number of dependent claims as referred to in the multiple dependent claim from which it depends.

(b) Improper Multiple Dependent Claim

If none of the multiple dependent claims is proper, the multiple dependent claim fee set forth in 37 CFR 1.16(j) will not be required. However, the multiple dependent claim fee is required if at least one multiple dependent claim is proper.

If any multiple dependent claim is improper, OIPE may indicate that fact by placing an encircled numeral "1" in the "Dep. Claims" column of form ** PTO/SB/07. The fee for any improper multiple dependent claim, whether it is defective for either not being in the alternative form or for being directly or indirectly dependent on a prior multiple dependent claim, will only be one, since only an objection to the form of such a claim will normally be made. This procedure also greatly simplifies the calculation of fees. Any claim depending from an improper multiple dependent claim will also be considered to be improper and be counted as one dependent claim.

(c) Fee calculation example

<i>Claim No.</i>	<i>Ind.</i>	<i>Dep.</i>
1. Independent	1	
2. Dependent on claim 1		1
3. Dependent on claim 2		1
4. Dependent on claim 2 or 3		2
5. Dependent on claim 4		2
6. Dependent on claim 5		2
7. Dependent on claim 4, 5 or 6		①
8. Dependent on claim 7		①
9. Independent	1	
10. Dependent on claim 1 or 9		2
11. Dependent on claims 1 and 9		①
Total	2	13

i) Comments On Fee Calculation Example

Claim 1 — This is an independent claim; therefore, a numeral "1" is placed opposite claim number 1 in the "Ind." column.

Claim 2 — Since this is a claim dependent on a single independent claim, a numeral "1" is placed opposite claim number 2 of the "Dep." column.

Claim 3 — Claim 3 is also a single dependent claim, so a numeral "1" is placed in the "Dep." column.

Claim 4 — Claim 4 is a proper multiple dependent claim. It refers directly to two claims in the alternative, namely, claim 2 or 3. Therefore, a numeral "2" to indicate direct reference to two claims is placed in the "Dep." column opposite claim number 4.

Claim 5 — This claim is a singularly dependent claim depending from a multiple dependent claim. For fee calculation purposes, such a claim is counted as being that number of claims to which direct reference is made in the multiple dependent claim from which it depends. In this case, the multiple dependent claim number 4 it depends from counts as 2 claims; therefore, claim 5 also counts as 2 claims. Accordingly, a numeral "2" is placed opposite claim number 5 in the "Dep." column.

Claim 6 — Claim 6 depends indirectly from a multiple dependent claim 4. Since claim 4 counts as 2 claims, claim 6 also counts as 2 dependent claims. Consequently, a numeral "2" is placed in the "Dep." column after claim 6.

Claim 7 — This claim is a multiple dependent claim since it refers to claims 4, 5, or 6. However, as